is necessary for transmission of light and does not adversely affect the quality of the shielding.

[0061] Though, in the present embodiment, conductive layers **54**, **56** on the rear surface **34** of the lens substrate portion **30** and on the front surface **22** of the base substrate portion **20** are present, a conductive layer **52** on the side walls of the cavity **80** (side surfaces **62** of the spacer **60**) can generally be sufficient. Instead of, or in addition to, a conductive layer **52** on the side walls of the cavity **80** there could also be a conductive layer on the outer side surfaces **64** of the spacer **60**, which is optionally connected to the layer **54** on the rear surface of the lens substrate portion **30** in an electrically conductive manner.

[0062] The shield **50** also serves for blocking light that would otherwise enter the system via the lateral end faces of the module, or stray light entering through the hole **42** and falling on the inner side surfaces **62**, and has, thus, a beneficial double function.

[0063] There could also be a further substrate portion with or without further lenses, arranged in between the lens substrate portion and the baffle substrate portion or in between the lens substrate portion and the base substrate portion, preferably separated from the respective substrates by means of spacers, such that two or more cavities are formed. In this case, the conductive layers **52**, **54**, **56** are arranged in the lowermost cavity, thus in the vicinity of the functional element.

[0064] The optical module **70** comprises all layers with the exception of the base substrate **20**.

[0065] FIG. **3** shows a further embodiment of the invention. The basic construction—base, lens and baffle substrate portions **20**, **30**, **40**, lens elements **36**, **38**, and spacer **60**—corresponds to FIG. **2**. In this case, there is no conductive coating **52** on the side surface of the spacer **60**, but the spacer **60** itself is conductive and constitutes part of the EMC shield **50**. It is, for example, made of a conductive material or comprises a conductive material. Like in FIG. **2**, there is optionally a conductive coating **54** with an aperture **55** on the rear surface **34** of the lens substrate portion **30**, which is optionally conductively connected to the spacer **60**. There may also be a conductive glue in between the spacer **60** and the base substrate portion **20**. This shield has the same effect as the one of FIG. **2**.

[0066] FIG. **4** shows a further embodiment of the invention, having again the same basic design as in FIGS. **2** and **3**. In this embodiment, the outer side surface **64** of the spacer **60** comprises a conductive layer **57**, in particular a coating, which constitutes or is part of the EMC shield **50**. The layer **57** is connected in a conductive manner to the base substrate portion **20**. The side surfaces **33**, **43** of the lens substrate portion **30** and the baffle substrate portion **40** may also comprise a conductive layer **57'**, **57"**, which may be made in one piece with the layer **57** on the spacer **60**, or may be connected thereto in a conductive manner. Optionally, there is also a further conductive layer **58** on the front surface **41** of the baffle substrate portion **40** with an opening in the region of the through-hole **42**. There may be further layers present on the front and/or rear surface of the lens substrate, which serve for beam shaping and may constitute a part of the shield.

[0067] FIG. **5** shows a further embodiment of the invention with a conventional cup-shaped housing/baffle **4** as shown in FIG. **1**. Like in FIG. **2**, lens elements **36**, **38** are arranged on both surfaces **32**, **34** of a lens substrate portion **30**. The front surface **32** of the lens substrate portion **30** is attached to the rear surface of the front wall **4"** of the baffle **4** such that the lateral walls **4"** project beyond the lens substrate portion **30**. The baffle **4** is placed on top of the base substrate portion **30**, wherein the lateral walls **4'"** act as a spacer **60**. According to the invention, the inner side walls **62** of the spacer **60** (lateral wall **4"** of the baffle **4**) comprise a conductive layer **52**, as described with reference to FIG. **2**. Like in FIG. **2**, there is optionally also a conductive layer **54** with an aperture at the rear surface **34** of the lens substrate portion **30** and a conductive layer **56** between the spacer **60** and the base substrate portion **20**, preferably a conductive glue.

[0068] A method of manufacture is described with reference to FIGS. **6***a-c:*

[0069] FIG. **6***a* shows a spacer substrate **600** in a partly sectional view. Such a spacer substrate **600** can be used for the embodiments of FIGS. **2-4**. The spacer substrate **600** comprises a generally planar front surface **602**, a generally planar rear surface **604** and a plurality of through-holes **606** extending between the front and rear surface **602**, **604**. The through-holes **606** have a cylindrical shape with circular cross section; the cross section could also have another shape, e.g. rectangular. The walls **608** of the through-holes **606** correspond to the inner side surfaces **62** of the individual spacers **60** shown in FIG. **2-4**. The spacer substrate **600** normally consists of a transparent material, e.g. glass or a transparent plastic, but could also be non-transparent.

[0070] For the embodiment shown in FIG. **3**, a spacer substrate **600** is provided which consists of a conductive material or comprises such a material such that the spacer substrate **600** is conductive.

[0071] In the other embodiments (FIGS. **2+4**), the non-conductive spacer substrate **600** is provided with a layer **52** of conductive material which at least covers the walls **608** of the through-holes **606**, and optionally also the front and rear surface **602**, **604**. The conductive material is preferably applied by a depositing process, such as, CVD, spraying, sputtering, immersing, such that a coating adhering at least to the walls **608** is formed.

[0072] The coated spacer substrate **600** is shown in FIG. **6***b* as second layer from below.

[0073] FIG. **6***b* also shows that further substrates are provided: A baffle substrate **400** comprising a plurality of funnel-like through holes **402**; a lens substrate **300** comprising a plurality of lens elements **36**, **38** on its front and rear surface **302**, **304**; and a base substrate **200** with a plurality of functional elements (not shown).

[0074] The lens elements **36**, **38** are preferably produced by a replication process on both surfaces of the lens substrate **300**, which is generally known. The lens elements are pairwise aligned with each other. The lens substrate **300** can on its rear surface optionally be provided with a layer of non-transparent, preferably electrically conductive material having apertures at the intended positions of the lens elements **38**, in order to provide the coating **54** and aperture **55** described in connection with FIG. **2**. This structure is preferably made by deposition, photolithography and etching, prior to the replication of the lens elements.

[0075] In a next step, the substrates **200**, **300**, **400**, **600** are aligned and stacked in an axial direction z. The positions of the through-holes **608** in the spacer substrate **600**, of the through-holes **402** in the baffle substrate **400**, of the lens elements **36**, **38** and of the functional elements are preferably such that these elements are aligned when the substrates are stacked.